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ABSTRACT

This action research project evaluated an intervention to improve student motivation, attendance, homework return, and academic growth. Participating were 22 third graders and 53 middle school students in two growing middle class communities in north central Illinois. Inadequate student motivation was documented through data on attendance, student time on task, class participation, and teacher journals recording classroom behavior and academic achievement. The resulting intervention consisted of: (1) cooperative learning activities implemented once weekly; (2) implementation of student choice concerning activities and assignments; and (3) lessons designed to reflect students' learning preferences, using a multiple intelligences perspective. Post intervention data indicated an increase in motivation for most of the targeted behaviors, especially staying on task, using time wisely, and asking and answering questions. Attendance rates fluctuated throughout the intervention. Teacher journals revealed a shift toward teachers assuming a facilitator role and an increase in the use of lesson plans targeting the seven multiple intelligences. (Eight appendices contain data collection instruments and sample instructional materials. Contains 37 references.) (KB)

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IMPROVING STUDENT MOTIVATION THROUGH THE USE OF VARIED INSTRUCTIONAL AND CURRICULAR ADAPTATIONS

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TABLE OF CONTENTS

ABSTRACT.....	iii
CHAPTER 1 - PROBLEM STATEMENT AND CONTEXT.....	1
General Statement of the Problem.....	1
Immediate Problem Context.....	1
The Surrounding Community.....	10
National Context of the Problem.....	16
CHAPTER 2 - PROBLEM DOCUMENTATION.....	18
Problem Evidence.....	18
Probable Causes.....	24
CHAPTER 3 - THE SOLUTION STRATEGY.....	33
Literature Review.....	33
Project Objectives and Processes.....	44
Project Action Plan.....	45
Methods of Assessment.....	48
CHAPTER 4 - PROJECT RESULTS.....	49
Historical Description of the Intervention.....	49
Presentation and Analysis of Results.....	52
Conclusions and Recommendations.....	58
REFERENCES CITED.....	68
APPENDICES.....	71
Appendix A Observation Checklist - Figure 1.....	71
Observation Checklist - Figure 2.....	72

Appendix B	Business Cards.....	73
Appendix C	Picture Frames.....	74
Appendix D	People Search.....	75
Appendix E	Sex Education Bingo.....	76
Appendix F	Venn Diagram.....	77
Appendix G	Scientific Ethics.....	78
Appendix H	T-chart.....	79

ABSTRACT

This research paper describes a program to improve student motivation, attendance rate, percentage of homework return, and student academic growth. The targeted population consists of third grade and middle school students in two growing middle class communities in north central Illinois. The problem of inadequate motivation will be documented through data revealing attendance rate, students' time-on-task, students' class participation, and teacher journals recording classroom behavior and academic achievement.

Analysis of probable cause research revealed that students' inadequate motivation is related to students' poor self-esteem, unchallenging and repetitive assignments, emotionally stressful classroom environments, and extensive use of extrinsic rewards.

A review of solution strategies suggested by knowledgeable others, combined with an analysis of the problem setting, resulted in the selection of three major categories of intervention: cooperative learning, students choice in activities and assignments, and lessons designed to reflect students' learning preferences.

Post intervention data indicated an increase in motivation for most of the targeted behaviors, which is attributed to the varied instructional and curricular adaptations.

CHAPTER 1

PROBLEM STATEMENT AND CONTEXT

General Statement of the Problem

The students of the targeted third grade and middle school classes exhibit inadequate motivation that interferes with academic achievement. Evidence for the existence of this problem includes office records documenting attendance rate, teacher records indicating percent of homework return, and assessments that reflect student academic growth.

Immediate Problem Context

This research is to be conducted at three sites in two different communities. School Site A is in a middle school in the northeast corner of community A. School Site B is an elementary school on the west side of community A. School Site C is a junior high school in community B. Community B is bordered on the south and east by community A.

School Site A

School Site A in this study is a middle school. The students of School Site A consist of neighborhood children as well as minority children who are bused from other neighborhoods

in order to comply with the mandatory desegregation guidelines of the district. School A consists of seventh and eighth grades. There are 945 students enrolled in the school. There are 520 male students and 425 female students who make up this population. The student ethnic background is as follows: 29% African-American, 62% Caucasian, 3.7% Asian/Pacific Islander, and 3.9% Hispanic. Thirty percent of the student population are of low income, live in foster homes, or are eligible to receive free or reduced priced lunch. School A has an attendance rate of 90.4%. The chronic truancy rate is 5.3%. The student mobility rate is 19.4% (School Site A Improvement Plan, 1995).

The faculty and staff working at School A consist of 103 part-time and full-time employees. The faculty consists of 71 instructors, three administrators, and three guidance counselors. Of those individuals, 88% are Caucasian, 12% are African-American, and 0.4% are Asian/Pacific Islander. The average age of the faculty is 45 years. A large portion of the faculty, 68%, has earned a masters degree. Twenty-three percent are currently working towards a masters degree. The average length of teaching experience is 14.9 years. Eighteen individuals make up the support staff. The support staff includes a nurse, a psychologist, a social worker, and a speech and language specialist. There are three clerical workers, a cafeteria

worker, three hall aides, and eight classroom aides. The recent job of parent liaison was added to the building in an effort to increase and improve communication with parents concerning student behavior and academic performance (School Site A Improvement Plan, 1995).

School Site A is a relatively modern building that was built in 1971. The building is a two story brick structure which is nestled on a 21.5 acre plot of land. All areas of the school are air-conditioned except for the gym. There are 50 classrooms in School A. In addition to the gym, there is a home arts room, a pool, three band/choral rooms, two technology labs, a cafeteria, an auditorium, and a large learning center. Additional rooms in the building include two offices housing the guidance counselors and administrators, and several teachers' work rooms and lounges. Most of the classrooms were originally large open pods used for team teaching. Makeshift walls and large plastic curtains have since been put up in an effort to divide the spaces into separate classrooms. As a result, noise from neighboring classrooms is frequently a distraction. Interior improvements have been made within the last three years including asbestos removal and new carpeting. The building, as well as the campus, is very well maintained, giving it a tailored appearance.

School A has many special programs designed to meet the social, emotional, and physical needs of its students. In the 1993-1994 school year, the school implemented a renaissance program. The program, We Inspire New Generations of Students (WINGS), was designed to give positive reinforcement rewards to students who achieve given requirements. The program uses donated goods and store discounts as incentives.

To help meet the recommendation of an advisor/advisee program, School A is piloting a program called Choices. The program is designed to give a small group of 12-15 students one adult who can help them through the struggles of being adolescents.

Each year the school puts together an all-school interdisciplinary unit (IDU). The function of an IDU is to show students how all disciplines can relate to the same topic.

To help students in the development of their social behaviors, the school offers many programs such as peer mediation, conflict resolution, and a student assistance program.

Tutoring programs have been organized in order to raise achievement levels of targeted students in both classwork and standardized tests. The building staff developers coordinate many other services for both faculty and students. Some of these services include workshops, inservices, and alternative lessons

in the classroom. Recently a program entitled the Suspension Intervention Program (SIP) was implemented in the school in an effort to reduce the number of students who are frequently suspended and to help these students achieve. School A also offers an after-school intramural program designed to allow all students to participate in sports and leisure activities. The county health department offers weekly sessions for targeted at-risk students in an attempt to educate them on drug prevention and to enhance their decision-making skills.

School Site B

School Site B in this study is an elementary school. The student enrollment for School B is 235. The number of African-American students is 61.3% of the total enrollment. Caucasian students make up 37.8%, and Hispanic students 0.9%. Ninety percent of the students are classified as coming from low income families. Of the 90%, 66% are minority and 34% are majority students. Twenty-five percent of the total population receives special education services. Student mobility rate is 29.8%. Chronic truants totaled 47, or 21.5%, for the 1994-1995 school year (School Site B Improvement Plan, 1995).

The full and part-time faculty and staff at School Site B total 29. Of the 29, seven are of the minority race, while 22 are of the majority race. There are five male faculty members.

Six faculty members have masters degrees and two are enrolled in graduate level programs.

School Site B houses one all-day kindergarten, one first grade, and third through sixth grades. There are also two self-contained special education classrooms and one resource room. There is a total of 12 regular classroom teachers. The support specialists include a physical education teacher, an art teacher, and a music teacher. Other support staff include two curriculum implementors, a student support specialist, two reading teacher-tutors, three Title One teachers, and two resource teachers. There are also three classroom paraprofessionals. Staff mobility is a yearly concern. Seven out of 12 classroom teachers transferred after the 1994-1995 school year. Of the 29 staff members, 21 have worked in the district three years or less.

School Site B was built in 1953 and is located on five wooded acres of land. To the west of the land is a public golf course, as well as a playground provided by the local park district. The facility is a one story building with four classrooms in the basement. Because of the age of the building, plumbing and sewer, as well as heating and electricity, are continual problems. The exterior walls need painting and minor repairs are needed for the windows. Trash and occasional

graffiti litter the building and school yard. The chipping paint from the walls and inadequate lighting around and within the building give the building an old, dreary look.

The current major program focus of School B is to become an environmental magnet school. School B is developing this program in an attempt to attract students from throughout the community. A discrimination lawsuit against the district necessitates additional efforts to balance minority and majority student population. Other programs School B has to offer include physical education, art, and music. There is a 30-station computer lab with a full-time Title One computer and math specialist. For the second year, Success for All, a John Hopkins' literature based reading program, has been implemented across grade levels. The third and fourth grades piloted the MathWings program during the 1995-1996 school year. Team Accelerated Instruction (TAI) is another math program which is implemented throughout the grade levels. For math and science, Accelerated Instruction in Math and Science (AIMS) is also implemented. These four programs all have a strong focus on cooperative learning. Incentive programs for behavior, completion of homework, and attendance are all included in the school's curriculum.

School Site C

School Site C in this study is a junior high school, serving 1,514 students in grades seven through nine. The school is located in a growing, working class community in north central Illinois. The student population is 93% Caucasian, 2% African-American, 4% Hispanic, and less than 1% Asian/Pacific Islander. Fifteen percent of the students are low income and the student mobility rate is 16%. The school attendance rate is 90% with a chronic truancy rate of less than 4% (School Site C Improvement Plan, 1995).

The school employs 86 classroom teachers. The teachers average just over 16 years of experience and half of them have a masters degree. The teaching staff in the school is over 98% Caucasian. They are supported by the principal, three assistant principals, four counselors, a full-time and a part-time social worker, and a school psychologist.

Part of the students and staff spend a portion of their day at the district's technology center which is located in another building. The center is designed to give "average" students an opportunity to experience education using "state of the art" technology by integrating math, English, science, and physical education. All of these students return to the junior high for elective classes such as art, band, home economics, shop or

foreign languages. Opening this building has relieved some of the overcrowding at the junior high.

The junior high is located in the former high school building. It is a sprawling, one story building with classrooms located around two courtyards at one end. There are two gyms and a swimming pool at the other end. The school offers core courses of mathematics, science, English, social studies, and physical education. The school offers art, music, shop, home economics, and health as electives or semester courses. Special education is available as inclusion or self-contained classrooms according to a student's Individual Education Plan. Seventh and eighth grade focus on the family concept while ninth grade is totally departmentalized.

The school has an "academy" for gifted students in seventh and eighth grade. They are all assigned to the same family and are given high school credit for some of their eighth grade classes. The school also has a transition program for students in seventh grade to help them adjust to junior high. Students who lack organizational skills are targeted for this program. The ninth grade is scheduled to be moved to the high school building by the year of 2000. This seems to be the reason for the lack of special programs in the ninth grade.

A full range of extra curricular activities are offered to the students in this school. Students may participate in academic activities such as quiz bowl, Future Problem Solvers, reading club, and an outdoor science club. Many students also are involved in competitive sports including football, volleyball, soccer, basketball, wrestling, and track.

The Surrounding Community

School Site A

School Site A is located in the northeast portion of a relatively large urban community. The school is located in one of the highest income areas in the city. Median income of the area is \$58,512 (Claritas Inc., 1995). The community is predominately Caucasian, however several African-American, Asian, and Indian families reside there as well. The neighborhood is characterized by medium to large well-kept homes built 30 to 40 years ago. The average home value is listed at \$114,080 (Claritas Inc., 1995). Residential, private, and public properties are well manicured and virtually litter free. School A is located primarily in a residential area, yet a scattering of businesses such as, strip malls, banks, gas stations, and churches are proximate to the facility. Many of the residents living in the community are college educated, white collar professionals. There is a large number of successful business

owners and executives. Due to the easy access to the state's largest city, many of the residents of this area commute from here to their places of employment.

Many school issues and concerns are faced by School Site A. One of the main concerns is the involvement of parents, particularly minority parents, in school related events, activities, and academics. Due to the fact that most minority parents do not live in the neighborhood, contact and transportation tend to be a problem. The parent liaison has helped to improve parent participation.

Student achievement continues to be an issue at School A as well. Tutoring and mentoring programs, a homework hotline, and a homework club have been established to help targeted students excel. Staff developers work with teaching teams and counselors in the effort to plan and develop instructional strategies designed to help all students achieve (School Site A Improvement Plan, 1995). Due to the varying incomes and socio-economic status of the students, teachers and staff must constantly be sensitive to the student differences. In an effort to involve the surrounding community, events such as career day and the IDU, which require the participation of local business and institutions, are planned each year.

School Site B

School B is located in the far western portion of a relatively large urban community. It is located in the lowest income area of the city. Many families in this neighborhood rely on public assistance and housing. To the east of the school there are two large public housing complexes in which many of the students of School B live. The houses in the neighborhood are in poor condition. Many are empty and boarded up. According to the U.S. Department of Commerce (1990) the average price per home in this neighborhood is \$23,000. The neighborhood also includes a few family-owned bars and stores, a gas station, and two fast food restaurants, as well as a large public golf course.

The population in this area is not balanced in relationship to the rest of the city. There are a total of 3,100 residents in the neighborhood including 2,320 African-American people, 730 Caucasian people, and 50 of an "other" race (U.S. Department of Commerce, 1990). Approximately 16% of the adults in the neighborhood have completed less than eight years of school, 36% have completed one to three years of high school, and about 30% have graduated from high school (Claritas Inc., 1995). This program also reports that almost half of the residents in the neighborhood are employed by manufacturing and construction companies. Other occupations include work in a trade or retail

business, and personal, professional, or business type occupations, and self-employment. Over 75% of these jobs are considered to be blue collar occupations and less than 25% are considered to be white collar occupations.

According to the U.S. Department of Commerce (1990) the projected average household income in 1994 would have reached \$27,000. A small portion of the neighborhood which is considered to be middle class has affected this projected income drastically. Of the two large housing complexes to the east of the school, 90% of these residents have incomes that are in the range of \$0-\$10,000.

The major issues faced by the school and surrounding community include low achievement levels, inadequate community involvement, and low income levels. Under the district lawsuit School B received an additional sum of money during the 1994-1995 school year to improve the achievement levels. The School Improvement Plan (1995) includes the goal to increase reading scores on the Stanford Achievement Test for each student by 20%. The plan also includes increased parental involvement and 100% parent-teacher conference rate. Low income levels also affect parent contacts because many families are without transportation or telephones.

Community A-Local School District

School Sites A and B are located in a large, urban city with a population totaling 140,000. There are four high schools, four middle schools, and 42 elementary schools in the district. The total student population is 26,574. Of the total enrollment 64.7% are Caucasian, 25.2% African-American, 2.8% Asian Pacific, and 0.2% Native American. Thirty-eight percent of the student population is considered to come from low income families.

After a lengthy trial, the local school district was found guilty of discrimination against minority students over the past 30 years. In an attempt to remedy this problem the court order states that the district must desegregate its schools. In order to comply with the guidelines of the lawsuit a plan called "Controlled Choice" will be implemented beginning in the 1997-1998 school year. This will drastically alter the student population in the elementary schools.

Community B

Community B is formed by three contiguous cities covering twenty square miles. These communities with 35,000 residents are experiencing a steady growth in housing and retail businesses.

This area is over 50% blue collar and clerical. The median home value is \$53,700 and the median family income is \$36,561 (U.S. Department of Commerce, 1990). There is a lot of new

growth in the northern part of this community due to high taxes in neighboring communities. This may eventually have an impact on the socio-economic status of the community.

One of the cities is currently trying to annex land in a neighboring county. If successful, this could spur new and rapid development of businesses and housing. The courts may make the final decision.

The unit school district has 6,394 students in seven elementary schools, one junior high, and one high school. The district superintendent and his staff are located at a site separate from the schools. The pupil-teacher ratio is 18:1 at the elementary level and is 23:1 at the secondary level. The pupil-administrator ratio is 284:1. The 1994 per pupil expenditure was \$4,902 with a mean teacher salary of \$37,309.

The district's curriculum focuses on the basics. However, the district is trying to implement site based management and is willing to try new programs. They built a new technology center for junior and senior high school students with the support of local businesses. These businesses donated money for equipment and the staff is offering classes to the employees of these businesses. The district paid to renovate the building and pays the staff their regular salary, as well as per diem pay, for extra training during the summer. The technology center offers a

business curriculum and vocational training by integrating core classes with their particular area.

This year the junior high adopted the family concept for seventh and eighth grades. The junior high is also adding technology to the classroom. The district bought 50 new computers for the junior high in 1995 and has purchased 84 new computers for 1996. They have added the necessary software and all classrooms will be connected to the Internet in 1996. These changes are consistent with the district's stated goal of creating a community of learners.

National Context of the Problem

Inadequate motivation and reduced student academic achievement have long been recognized as a problem associated with education. Motivation to learn has been a major area of concern among educators (Hancock, 1994). There are several factors that contribute to the national problem of inadequate motivation. Some of these factors include students' individual perception about learning, peer influences, reduced parental involvement, and other environmental and social issues.

A student's individual perception about school and learning has been labeled in many different ways in research literature. Many studies address whether students believe they have the ability to perform a task (Pintrich & DeGroot, 1990). Teachers

often feel these perceptions are determined by past experiences and are very difficult to change.

Peer influence is another very important factor among adolescents and should be addressed in planning classroom management and classroom goals. According to Wentzel (1989), social responsibility goals distinguish high-achieving students from low achieving students. For example, low-achieving students will settle for the short-term, easily attainable goal to have fun with friends rather than pursue the more difficult long-term goal of learning algebra. Education must allow students to pursue academic goals, social interaction goals, and social responsibility goals to motivate student behavior.

Students also vary according to the dynamics of their environment. This could be due to family or community influences, including such things as family structure, geographic location, and socio-economic factors. To understand student academic achievement it is necessary to obtain measures of their interests, attitudes, and specific motivations (Boyle, Start, & Hall, 1989). Research establishes the fact that concerns of inadequate motivation transcend time, geographic location, and social standing. The most significant force in motivating students is their belief in their capacity to be successful (Kallick, 1992).

Chapter 2

PROBLEM DOCUMENTATION

Problem Evidence

In order to document the extent of inadequate student motivation, observation checklists of students' time-on-task, observation checklists of students actively engaged in class participation, attendance rates, and ongoing journals of classroom behaviors have been recorded over a three week period of time.

The targeted groups involved include 25 students from School Site A, 22 students from School Site B, and 28 students from School Site C, for a total of 75 students.

An observation checklist of students' time-on-task and an observation checklist of students' class participation (Appendix A) were developed by the researchers to aid in the recording of specified behaviors. The targeted students were observed by the researchers during instruction time over the course of the first three weeks of the 1996-1997 school year. A summary of the teachers' observations of students' time-on-task and the number of incidents by the targeted students is presented in figure 1.

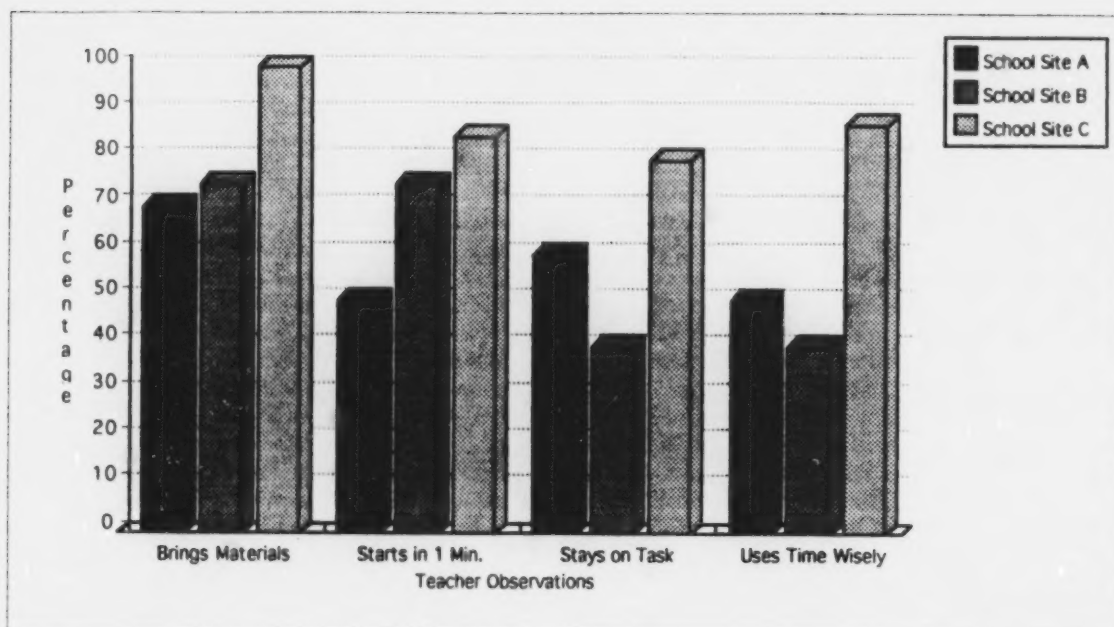


Figure 1. Categories and frequency of students' on-task behaviors for the targeted classes during the first three weeks of the 1996-97 school year.

Figure 1 shows that 70% of students at School Site A bring their materials for class. These data also indicate that 50% of the students start a task in one minute, 60% stay on task, and 50% use time wisely in School Site A. The researchers interpret that bringing materials and starting a task within one minute after it is assigned demonstrates extrinsic motivation or possibly compliant behavior. The researchers interpret that staying on task and using time wisely are more accurate measures

of intrinsic motivation. The students at School Site A had a 20% drop from "brings materials" to "uses time wisely."

These data also show a relatively high percent, an average of 75% of students at School Site B, comply with the teacher's expectations of bringing necessary materials for class and starting a task within one minute after it is assigned. The researchers interpret the two categories "stays on task" and "uses time wisely" as reliable indicators of intrinsic motivation; School Site B appears to show a substantial decline in this area.

Figure 1 also indicates that School Site C has an uncharacteristically high percentage of students, 100%, who bring materials to class and 85% of students who start a task in one minute. School Site C, although showing a slight decline in the last two categories namely, "stays on task" and "uses time wisely", still appears to have higher percentages of student involvement, 80% and 88% respectively. This, as mentioned before, shows a higher level of intrinsic motivation.

A summary of the teachers' observations of students' class participation and the number of incidents by the targeted students is presented in figure 2.

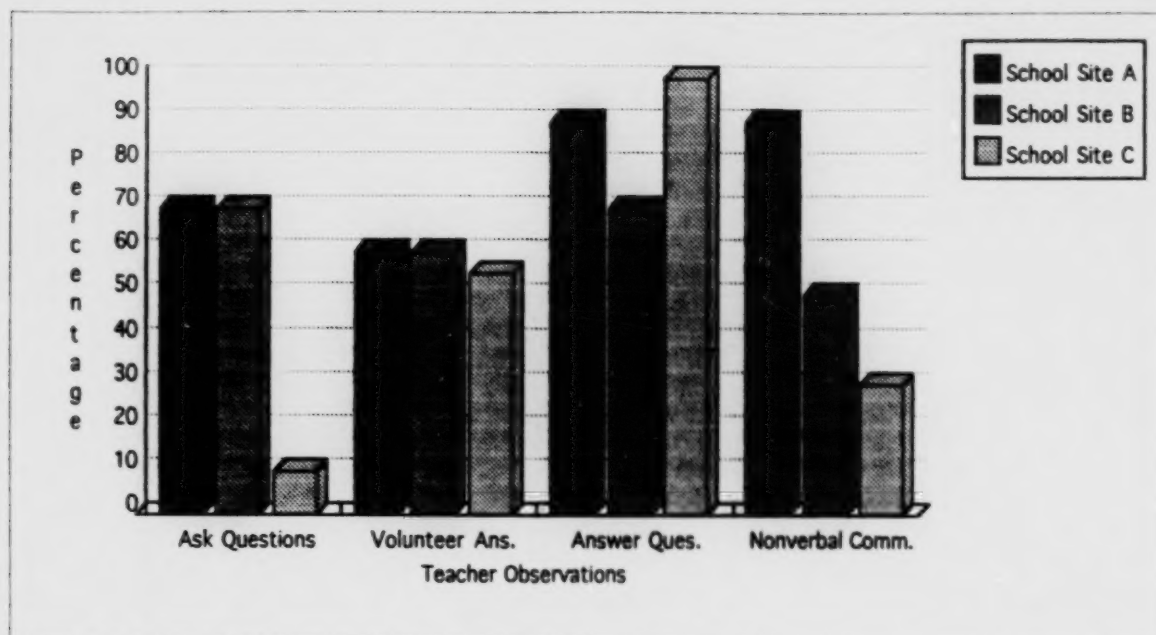


Figure 2. Categories and frequency of class participation for the targeted classes during the first three weeks of the 1996-97 school year.

Figure 2 shows that 70% of the students in School Sites A and B ask questions during a lesson. Ten percent of students in School Site C also ask questions. These numbers indicate the percentage of students who are intrinsically motivated to seek further knowledge.

Figure 2 also shows that students from all three schools have a similar percentage of students who are willing to volunteer answers. The number of students who volunteer answers in School Sites A and B is 60%. The number of students at School

Site C who volunteer answers is 55%.

A much higher percentage overall in the category "answers questions" is also shown in figure 2. Ninety percent of students at School Site A, 70% of students at School Site B, and 100% of students at School Site C participate. This indicates that students are more apt to comply with standard classroom expectations in this area.

Ninety percent of students in School Site A, 50% of students in School Site B, and 30% of students in School Site C show different types of nonverbal communication during lessons. The types of nonverbal communication observed by the researchers included eye contact, smiling, head nodding, and other types of body language which indicate active listening.

These data reveal that most students in this study will engage in necessary class activity. However, very few of the students exceed teacher expectations. This may indicate compliance of students due to the possibility of extrinsic rewards when doing the required work, or perhaps even due to the fear of consequences if the minimal requirements are not met.

Student attendance rates have also been documented for the first three weeks of the school year. As expected, attendance is at a high level possibly due to the newness of the school year, as well as students forming new relationships. School Site A

has an average attendance rate of 91%. School Site B has a rate of 89%. School Site C has a rate of 98%. The total attendance rate of the 75 students involved in the research is approximately 93%. The combined chronic truancy rate of the three schools is 9%. Chronic truancy is defined by the Illinois State Board of Education as "Chronic truants are students who are absent from school without valid cause for 10% of the total school days" (School Site A Improvement Plan, 1995).

A synthesis of the researchers' journals over the three-week period of time finds several commonalities in student behaviors that the researchers interpret to be evidence of inadequate motivation. The behaviors observed fall into three general categories. The three categories include: socialization, apathy, and student ownership.

The first of these categories is socialization among students. This category is characterized by documented behaviors such as: excessive talking, talking at inappropriate times, and inappropriate peer interaction.

The next category observed is general apathy. Examples of this category include: limited attention span, unengaged body language, and assignments displaying minimal effort.

The third category observed is insufficient student ownership. Tardiness, missing and late assignments, and being

unprepared for class are examples of this category.

Probable Causes

The literature suggests several underlying causes for inadequate student motivation. The causes identified can fall into the following categories: a decrease in or negative influence of parental involvement, an unhealthy living environment, social hindrances, and insufficient school curriculum and teaching methods.

The first probable cause, a decrease in parental involvement or negative parental involvement, may occur for several reasons. What was once known as the nuclear family is now a family that may include two working parents, single-parent families, adoptive families, or remarried families (Scherer, 1996). Because of the rapidly changing society and economy, parents have a more difficult time meeting their own individual needs as well as those of the family. Much more time is devoted to working so that parents can make sure that the children have their basic needs met. This means that children are left alone and are forced to become independent at a very early age. Many parents cannot or choose not to take what little time they may have to become involved in their child's education (Scherer, 1996).

In addition to the changing family, the way parents respond to a child when he or she misbehaves can have a major

influence on the child's future development and can contribute to problems which occur in the classroom. Self-concept is developed in the home environment, and many parents do not have sufficient skills to help children who live in unstable homes (Curwin & Mendler, 1988).

The relationship that a child has with his or her parent(s) will also greatly influence the way in which the child responds in school. When a child has developed a sense of security in the home, the level of competence, control, and ways of coping in school are all affected in a positive manner (Ryan, Stiller, & Lynch, 1994).

More and more schools are reaching out for support from families by providing parenting classes, doing home visits, using family members as tutors, and providing social services for their children. Still, many parents simply do not have time or may for some reason feel reluctant to get involved in their child's education. Whatever the cause may be for the decrease in or negative influence of parental involvement, it is important to remember that "Perhaps the largest single influence on children is the quality of their home life" (Curwin & Mendler, 1988, p.6).

The second probable cause related to inadequate motivation is an unhealthy living environment. Other than the home, the primary environments of a child are the neighborhood and school.

Increased deterioration of sub-communities appears to be one cause of decreased motivation among children who reside in these areas. Children seek to be accepted and have a voice in issues that affect them.

Experts say that groups such as gangs, offer both a sense of belonging and a sense of empowerment for children (Garcia, 1994). Groups such as this do not enhance positive attitudes toward school. Manning (1996) states that children often migrate to peer groups that put higher value on sports and social success than on academic success. As a result, children may spend more time engaging in activities that enhance athletic skills rather than academic skills. These peer groups may also pressure children indirectly to neglect studies and concentrate more on socialization.

Manning (1996) also suggests that the needs of a caring community are not being met for some children. Therefore, it may be the responsibility of the schools to create a caring atmosphere. Garcia (1994) states, "A safe, orderly, and secure environment is conducive to learning and academic achievement" (p.22). Schools appear to be a place where children can escape the streets. The reality is, because of policies created to prevent gangs and their related activities, they actually guarantee members of these groups will continue to reject school

(Garcia, 1994). Garcia (1994) also states that half of the violent crimes against children 12 to 19 years of age happen at school. In this type of environment one in 12 children may stay home from school for fear of being violated. The thought of violation overrides the desire to be educated. Garcia (1994) states, "In an environment such as this teachers can't teach and students can't learn. An unsafe school campus thwarts the learning process, stifles creativity, and paralyzes the imaginative ideas of children" (p.23).

The classroom environment may also decrease the drive of children to become educated. Children have a need to feel empowered. For example, allowing students to give input in the layout of the classroom creates a sense of ownership. It is the lack of ownership in the classroom which plays an instrumental role in a child's unwillingness to turn on to school (Wheeler, 1994).

Another aspect of the classroom that may cause decreasing motivation is insensitivity to racial and cultural backgrounds. Research suggests that minority students, including those who speak another language, struggle in classrooms where they feel unaccepted by others (DeVoe, McMillen, & Zimmerman, 1996; Garcia, 1994).

Neighborhoods, schools, and groups such as gangs aren't the only environments that may influence a child's desire to be educated. Not every child is influenced by these environments. However, these seem to be the primary areas that affect some children.

Another probable cause for inadequate motivation in schools are social hindrances. Success in education for students requires many more components besides text books and homework. The social aspects of a child's education are equally important as well as directly connected to a child's academic achievement. According to Wentzel (1989) "Social skills and behaviors are strong predictors of grade retention, placement in special education, and dropping out, independent of intellectual ability" (p.131). During their school years, students are faced with many situations that challenge their social success.

Teachers many times create situations which can inhibit motivation in regard to social development. An example of this is a teaching method called whole-class question-answer. This occurs when the teacher calls on one student to answer a question (Kagan, 1989). This type of teaching tactic, used exclusively, creates a competitive classroom structure, pitting students against each other as they seek recognition from the teachers. Kagan (1989) states, "The failure by one student to give a

correct response increases the chances for other students to receive attention and praise. Thus, students are set against each other, creating poor social relations and peer norms against achievement" (p.13).

Another social hindrance is the underdevelopment of social skills. The four main social skill areas needed for maximum student effort are communication, trust, leadership, and conflict resolution (Bellanca & Fogarty, 1991). Unfortunately, people simply are not born with social skills. These skills also do not naturally form and develop when one is placed in a task group or other social situation (Johnson & Johnson, 1989-1990). Social skills must be taught, as well as continually practiced, in order to maintain them. Not all children learn the appropriate social skills at home. Therefore, not every student comes to the classroom equipped with the necessary skills.

Research also suggests that a child's social interactions with peers can have negative effects on academic achievement. According to a recent study one of the largest impacts on a student's academic performance is the student's friends (Leslie, 1996). Since students are exposed daily to negative social experiences, it is inevitable that negative attitudes result. Leslie (1996) also states, "The prevalent attitude among students is that "getting by" is sufficient, and the study infers that

there is considerable pressure on students to underachieve" (p.72). Students, particularly adolescents, are easily swayed by peer influences. Another theory of why some students are underachieving academically may be due to the idea that to achieve is somehow unfashionable (Latanision, 1995).

Regardless of its source, social hindrances are a reality for almost every student. Interactions with peers, development of social skills, and the social structure of the classroom are all a part of a child's academic experience. How a child deals or copes with these social challenges has an impact on his or her academic performance.

The data compiled by the researchers demonstrate a low interest level in classroom activities by a number of students. Another probable cause for inadequate motivation could be the school's curriculum or a teacher's individual teaching strategies. The literature suggests both of these elements can contribute to a low level of student interest.

According to Wasserstein (1995), there are five maxims that have grown out of surveys that were administered to middle school students in Englewood, Colorado. These include: "1) Students of different abilities and backgrounds crave doing important work. 2) Passive learning is not engaging. 3) Hard work does not turn students away, but busywork destroys them. 4) Every student

deserves the opportunity to be reflective and self-monitoring.

5) Self-esteem is enhanced when we accomplish something we thought impossible, something beyond us" (Wasserstein, 1995, p.43). This research confirms the relevance of the students' perspective.

The literature suggests teachers concur with many of these same maxims. A survey of teachers by Zahorik (1996) resulted in three similar conclusions. The first conclusion was that generating situational interest is an important teacher activity. The second conclusion stated that the hands-on approach is the primary method that teachers use to stimulate interest. Other methods used were personalized trust, group tasks, teacher enthusiasm, and practical tasks. These other methods were thought to incorporate students' self-governing abilities. The third conclusion stated that teachers infrequently use content ideas to establish student interest (Zahorik, 1996). These conclusions are very similar to the ideas of both the students surveyed and the journal notes of the researchers involved in this study.

This research questions the traditional practices of education. In summary, lecture as a form of teaching content material is ineffective unless relevancy can be conveyed to all students. Dictatorial classroom management is also questioned in

lament that students are not motivated, but what they are actually saying is that they do not know how to persuade students to work" (Glasser, 1990, p.39).

CHAPTER 3

THE SOLUTION STRATEGY

Literature Review

A review of the literature revealed many findings which contribute to inadequate student motivation. Several methods should be considered when constructing an intervention to promote positive educational experiences in an attempt to increase academic achievement. The professional literature suggests a number of solutions that address student motivation and achievement. The five solutions discussed in the following portion of chapter three include: multiple intelligences, student choice, cooperative learning, intrinsic and extrinsic factors, and emotional climate of the learning setting.

The first strategy described to increase student motivation is varying lesson plans to meet students' needs. In traditional classrooms the teacher makes the lesson plans and is the focal point of all interactions. This can work well for a dynamic, creative teacher who includes a variety of activities that the students enjoy. Unfortunately, not all teachers are capable of doing this on a regular basis. Many teachers, including hard working ones, fall into a pattern which they repeat daily.

According to Strong, Silver, and Robinson (1995), unchallenging, repetitive assignments decrease motivation. A literature search revealed many strategies to increase motivation by tailoring lessons to students' interests and learning preferences.

A place to begin any research for variety in the classroom would be Gardner's theory of multiple intelligences. This theory, first published in 1983, states that each individual possesses several different and independent capacities for solving problems and creating products (Chapman, 1993). The seven intelligences are Verbal/Linguistic, Musical/Rhythmic, Logical/Mathematical, Visual/Spatial, Bodily/Kinesthetic, Intrapersonal, and Interpersonal. Recognizing these intelligences is one way to provide variety in class. Teachers can adapt their lessons to more adequately meet students' needs.

According to Chapman (1993), multiple intelligences can be understood by a shoe metaphor. Each child has all of the shoes in his or her closet, but some fit more comfortably than others. If the shoe fits more comfortably, then a student will shine in that intelligence. If the shoe fits too snugly, the owner will want to choose a more comfortable pair. To meet the diverse needs of today's students, we need to allow each student to wear the shoes, at least occasionally, with which they feel most comfortable.

There is a wide range of activities that can be used effectively in each different intelligence. For instance, in the verbal/linguistic intelligence Chapman (1993) lists 31 different activities that incorporate this intelligence. Some examples of these activities would include the use of computers, magazines, VCRs and televisions, dramatic readings, and peer tutoring. Educators can also target more than one intelligence in a lesson to ensure that a greater number of students achieve their goals.

The second solution, student choice, allows students to select lessons that reflect their individual learning style. A research project addressing student motivation began ten years ago by Strong, Silver, and Robinson (1995). They started by asking teachers and students what work they found engaging and what work they disliked. A distinct pattern quickly emerged in their responses. Work that stimulated their curiosity, allowed them to express their creativity, and built positive relationships with others was considered engaging. Teachers and students both disliked work that was repetitive, required little thought, and was forced on them by others. From their research, Strong, Silver, and Robinson (1995) came up with a model of student engagement called SCORE. This is an acronym that comes from four essential human needs:

Success - the need for mastery

Curiosity - the need for understanding

Originality - the need for self-expression

Relationships - the need for involvement with others

Energy - this will build under the right classroom conditions

Teachers need to try to address these needs in their daily lessons. Written questionnaires can be used to determine student interests and find ways to integrate these into the curriculum. Success, curiosity, and originality can be addressed by task choices. These might include which book to read, which graphic organizer to use, which resource materials to read, and what product to use for assessment (Chapman, 1993). The authors suggest cooperative learning as a way to address the need for relationships (Strong et al., 1995). The model suggests that if this plan is followed, student energy will be the end result.

The third possible solution to the problem of student motivation in the classroom, as suggested by the researchers, is the use of the cooperative learning instructional approach as a tool for teaching. In 1990, Slavin found that cooperative learning was successful in urban and rural schools in that students learned not only to cooperate, but learned to like each other regardless of ethnic or economic background. Students also showed an increase in academic performance (Slavin, 1991).

Bellanca and Fogarty (1991) stated that research has shown that the cooperative learning model is positive in its effects and its approaches are beneficial, as well as appropriate, for all curricular areas. Cooperative learning encourages higher-order thinking, problem solving, and develops social skills and positive attitudes. Cooperative learning also allows for group interaction, shared roles, reflection, and reliance on each other instead of the traditional lesson in which the student works alone, is responsible for the whole task, promotes little or no reflection, and has only him or herself to rely on (Bellanca & Fogarty, 1991).

According to Johnson and Johnson (1989-1990) one of the requirements of cooperative learning is the direct teaching of social skills. Developing social skills helps in keeping good psychological health (Johnson & Johnson, 1989-1990).

There are five stages in teaching social skills as described by Bellanca and Fogarty (1991). The first stage is called the hook. The hook lessons are the foundation of teaching social skills. To gain students' attention, the teacher provides some type of experience to "hook" the class. This may be a role play or a structured group activity such as a "people search" (Bellanca & Fogarty, 1991).

Next, the teacher guides the students in creating a T-chart or web that uses words to describe or explain the social skill being taught. This is called the teaching stage. The T-charts and webs can then be made into charts to display in the classroom or students can make individual charts (Bellanca & Fogarty, 1991).

Providing guided skill practice is the next stage in teaching social skills. If active listening is the skill being focused on, this can be taught in a number of ways. For example, students can paraphrase each other's ideas either in pairs or to a larger group. After teaching a specific skill over a period of time the teacher can build the component in a number of ways. For example, if the lesson is a group activity and the social skill being taught is encouragement, students could list five encouraging words or actions that they heard or saw during the activity (Bellanca & Fogarty, 1991).

Observations are the next stage in teaching social skills. This can be done by using teacher checklists or teacher assigned observers. While the class is working on an assignment, it is the observer's job to record samples of the social skill being taught at that time. After the assignment the teacher would then recognize the positive examples recorded by the observer, further reinforcing the social skill. With enough practice over time the

social skills will begin to become automatic (Bellanca & Fogarty, 1991).

The final stage in teaching social skills is the use of a group reward system. Examples of this include certificates, marbles in a jar, or coupons which can be used for free time or extra credit toward a grade (Bellanca & Fogarty, 1991).

McDaniel (1985) stated that to promote motivation, students must actively be taught how to cooperate in order to reach academic goals. These skills do not come naturally to most students, especially in a traditional classroom setting. In the cooperative classroom students can build supportive relationships and strong group morale (McDaniel, 1985).

The fourth possible solution when attempting to improve student motivation is the use of extrinsic and intrinsic rewards. The concept of extrinsic and intrinsic rewards used to motivate students to learn is a topic that has spawned debate and controversy in the educational community (Strong et al., 1995). Most educational experts and researchers agree that motivation toward academic tasks that comes from within a student is the most positive and effective for the learning process. Students who are intrinsically motivated are, according to research, more inclined to seek and engage in tasks and activities for interest and enjoyment (Tripathi, 1992). The overall concern that most

researchers have toward external motivators whether punishment or reward, is the idea that continually rewarding someone for performing a given task will diminish the person's interest in the task (Tripathi, 1992; Brandt, 1995).

Not all experts share the sentiment that external motivators should be abolished. They contend, that when used under certain conditions and circumstances, extrinsic rewards can help to enhance a person's intrinsic motivation (Tripathi, 1995; Strong et al., 1992).

One theory held by Stipek (1988) suggests extrinsic rewards can be used effectively in specific situations. Depending on the engagement level of the task, extrinsic rewards should not be introduced. Tasks that are enjoyable and interesting do not require the involvement of extrinsic rewards. During tasks that are moderately difficult and not particularly boring, extrinsic rewards should be used only when necessary and should be steadily withdrawn as the topic is covered. Stipek (1988) also mentions that students must be made aware of the immediate use of the information and skills being learned. Finally, he concludes that during repetitive and boring tasks, which should be kept at a minimum, teachers may find it necessary to offer extrinsic rewards to motivate students.

Perhaps one of the most staunch adversaries of the use of external motivators, particularly rewards, is Kohn. Kohn (1993) argues that rewards are damaging particularly when the task is already intrinsically motivating (Brandt, 1995). He also holds firm to the idea stated earlier regarding the decrease of interest toward performing a task when continually rewarded. It is Kohn's (1993) belief that one cannot motivate another. Motivation is something that comes from within. He suggests that teachers concentrate on three ideas to help promote intrinsic motivation: content, community, and choice. Students who are in a comfortable and safe environment, who are given engaging and relevant tasks, and who are allowed to make choices are, according to Kohn (1993), most likely to be intrinsically motivated to learn.

Chance (1992) expresses the positive aspects of extrinsic rewards. Chance stated "To teach without using extrinsic rewards is analogous to asking our students to learn to draw with their eyes closed" (1992,p.207). Chance (1992) agrees that rewards can reduce motivation when used inappropriately yet still holds fast to the positive effects they offer when used with care. In his article, "Rewards of Learning", he lists a variety of guidelines recommended by experts to follow when using extrinsic rewards to motivate students. Chance (1992) contends that extrinsic rewards

are the most powerful reinforcement tool teachers have in the classroom.

The debate regarding intrinsic versus extrinsic motivation is one that undoubtedly will be the topic of much research for years to come. The underlying purpose of all the research surrounding this topic is the same; the desire to provide students with the best education possible. It is a teacher's responsibility to design lessons and create an atmosphere that ensures optimal learning opportunity.

The fifth possible solution to increase student motivation is improving the climate of the classroom. The educational climate of American schools may play a more important role in motivating students than once thought. "A joyful classroom makes students more apt to learn how to successfully solve problems in potentially stressful situations" (Sylwester, 1994, p.61). Recent developments in cognitive research are uncovering evidence that may prove helpful in engaging students in their learning.

It is known that one's attention is driven by emotions and attention plays a large part in learning and memory (Sylwester, 1994). Does this mean unmotivated students lack emotions and therefore can't learn? Certainly not. However, Sylwester (1994) states that emotions are, most often, the best indicator of

behavior. Teachers need to be aware that inappropriate behavior may be a result of unchallenging, repetitive work that doesn't reach students' emotions in a positive manner. Therefore, a student's emotions can allow him or her to neglect certain thoughts of a situation. Students then act on instinct based on the incoming information. Irrational behavior can result from acting on instinct alone (Sylwester, 1994). Sylwester (1994) also states that inappropriate behavior reduces attention which in turn affects grades.

Low grades in school create an increase in student stress. Sylwester (1994) mentions that an emotionally stressful school environment can produce negative affects on student learning. United States schools may be overlooking what could be a major piece in increasing motivation and learning among students. Many Americans believe that Eastern Asian students face the most emotional stress. According to an article written by Bower (1994), this isn't necessarily true. He states that American students lack the parental support and feel more pressure to excel in extracurricular activities. In a survey by Amen and Reglin (1992), students were found to be emotionally stressed in five main areas. These include: 1) doing well in school, 2) excelling in extracurricular activities, 3) dealing with sick family members, 4) having intimate relationships, which may even

increase pressure to have sex, and 5) pressured by peers to experiment with drugs and alcohol. Emotional stress of our students is not something educators and parents can take lightly. This stress must be dealt with properly or drop out rates, crime rates, and drug usage will continue to increase (Amen & Reglin, 1992).

Teachers are always trying to find what works best for their students, but sometimes the obvious is overlooked. Teachers know about students' emotions and students' stresses, but they all need to consider them as contributors to inadequate motivation.

As previously discussed, the literature suggests five possible solutions to increase student motivation and achievement. The five solutions: multiple intelligences, student choice, cooperative learning, intrinsic and extrinsic rewards, and the educational climate of learning, will be incorporated into the action plan.

Project Objectives and Processes

As a result of a program to increase students' ownership in their learning, during the period from September 1996 to January 1997, the targeted classes will increase academic participation as measured by teacher journal entries, observation checklists of time-on-task, observation checklists of class participation, and students' attendance records.

1. Lessons that involve cooperative learning activities will be developed and implemented in the classroom.
2. Learning activities that address students' interests will be developed for subject areas.

3. Materials that foster student involvement in presentation of lessons will be developed for subject areas.

Project Action Plan

Action plan for the intervention:

- I. Lessons that involve cooperative learning activities will be developed and implemented in the classroom.
 - A. Teacher assigned cooperative groups
 1. Base groups of three to four students
 2. Heterogenous groups
 - B. Bonding activities
 1. People search
 2. Group name/logo
 3. Who am I?
 4. Snapshots
 5. Business cards
 6. Me bag/magazine
 7. Four corners
 8. Picture frames
 - C. Social skills
 1. Cooperation
 - a. Share materials
 1. T-Charts
 2. Role playing
 3. Class lists
 4. Think-Pair-Share
 - b. Take turns
 - c. Do your job
 - d. Consider others' ideas
 2. Encouragement
 3. Active listening/communication
 - a. Eye contact
 - b. Use names
 - c. 6" voices
 - D. Group roles
 1. Class discussion of importance and description of roles
 - a. Recorder
 - b. Encourager
 - c. Materials manager
 - d. Time keeper
 - e. Presenter
 - f. Artist
 - g. Checker

E. Scheduling

1. One full, formal cooperative lesson per week
2. Social skills reinforced daily
3. Implementation to take place during the first semester (September-January) of the 1996-1997 school year

II. Learning activities that address students' interests will be developed for subject areas.

A. Multiple intelligences

1. Verbal/linguistic
 - a. Computer instruction
 - b. Hands-on experiments
 - c. Storytelling
 - d. Graphic organizers
 - e. Games
2. Musical/rhythmic
 - a. Songs, cheers, raps, poems
 - b. Background music
 - c. Music mnemonics
 - d. Unison recall
3. Logical/mathematical
 - a. Puzzles
 - b. Games
 - c. Venn diagrams/matrices
 - d. Computers
 - e. Experiments in labs
 - f. Use of manipulatives
 - g. Calculators
 - h. Challenge tasks
 - i. Time lines and outlines
4. Visual/spatial
 - a. Posters, charts, graphics, pictures
 - b. Illustrations, sketches, drawings, paintings
 - c. Overhead, board
 - d. Active imagination
 - e. Demonstrations
5. Bodily/kinesthetic
 - a. Role playing
 - b. Centers
 - c. Outdoor education
 - d. Sports/games
 - e. Exercise
 - f. Interviews
 - g. Projects
6. Intrapersonal
 - a. Problem solving

- b. Goal setting
 - c. Journals/reflection time
 - d. Centers
 - e. Independent learning times/assignments
 - f. Self discovery
 - 7. Interpersonal
 - a. Video
 - b. Computers
 - c. Think-Pair-Share
 - d. Jigsaw
 - e. Creative tasks; collages, songs, poems, comic strips
 - f. Cooperative games
 - B. Project-based learning
 - 1. Student choice to work alone or with others
 - 2. Choice of final product
 - a. Oral presentation
 - b. Written report
 - c. Exhibition
 - d. Play
 - e. Song
 - C. Journals
 - 1. Reflection
 - 2. Student input for presentation of lessons
 - 3. Record keeping
 - 4. Predictions/hypothesizing
 - 5. Transfer beyond the classroom
 - 6. Transfer between subject areas
 - 7. Teacher/student communication
 - 8. Personal entries
 - a. Stories
 - b. Feelings
 - c. Opinions
 - d. Lecture/movie notes
 - D. Traditional
 - 1. Lecture
 - 2. Independent study
 - 3. Worksheets
 - 4. Video/filmstrips
 - 5. Whole group activities
 - 6. Written tests
- III. Materials that foster student involvement in presentation of lessons will be developed for subject areas.
- A. Graphic organizers
 - 1. PMI
 - 2. KWL chart

- 3. Web
- 4. Venn diagram
- 5. T-chart
- 6. Flow chart
- 7. Human graph
- B. Role cards
- C. Office supplies
 - 1. Newsprint
 - 2. Markers
 - 3. Spiral notebooks
 - 4. Other

Methods of Assessment

In order to assess the effects of the intervention, four measurement tools will be used. Teachers will record changes in the attendance rate of students. Observation checklists of students' time-on-task will be recorded by teachers. Observation checklists of students' actively engaged in class participation will also be recorded. Finally, teachers will keep an on-going journal of classroom behaviors and academic achievement.

Chapter 4

PROJECT RESULTS

Historical Description of the Intervention

The objective for this project was to increase student motivation in the classroom. Cooperative learning, multiple intelligences, intrinsic and extrinsic factors, and student choice were implemented to influence the desired changes.

Cooperative learning activities were developed and implemented in the classroom. A minimum of one full formal cooperative lesson per week was taught throughout the intervention. Heterogenous groups consisting of three to four students were assigned by the teacher at the beginning of the year and remained throughout the intervention. School Site A consisted of two groups of students due to the quarter change after nine weeks.

Bonding activities such as business cards, picture frames, and the "people search" were used to develop student trust. Some examples of the activities used include the following: School Site A used business cards at the beginning of both quarters. On index cards each student creatively printed his or her name, decorated the card, and listed five interests or favorite things.

After compiling the cards, the class had time to mingle around the room viewing their classmates' cards. When students found that their interests matched another student's they wrote their initials on that student's card (Appendix B).

School Site B used picture frames. Students were assigned a partner for reading class. They were then given time to discuss their interests in and outside of school. A picture frame was drawn on newsprint by the teacher. Around the edge of the frame each student wrote what was unique about him or herself. In the center of the frame, the students wrote and drew pictures of what they found they had in common (Appendix C).

Students at School Site C wrote in their journals about what makes them unique. When reading the journals, the teacher chose specific information about each student and included it in a "people search". An example of the "people search" made from this information can be found in Appendix D.

In an effort to create a cooperative climate, social skills were taught and consistently reviewed. Examples of social skills taught included cooperation, encouragement, and active listening. These were used in a variety of subject areas at all three school sites. Structuring lessons by using specific student roles designed to reinforce student responsibility supported the cooperative setting.

Lessons were planned and presented using a variety of intelligences. Some materials that were used included: educational games, graphic organizers, and computers. An example of educational games used by School Site A was Sex Education Bingo. This game was developed as a tool to review vocabulary words and concepts for the unit test (Appendix E). One graphic organizer, the Venn diagram, was used in School Site B during science class to compare and contrast the Cheyenne and Navajo Native American tribes. This also served as a review for the unit test. Sex Education Bingo and the Venn diagram are examples of helping students enhance their verbal/linguistic intelligence. These examples can also be found in Appendix F. Students at School Site C worked in pairs on the computer for Internet searches to find articles and information about related science topics. This supplemented the curriculum and targeted the interpersonal intelligence as well.

Project-based learning offered opportunities for students to work alone or with others. Students were given the option to create projects of their choice. Several ways projects were presented included oral presentations, written reports, exhibitions, plays, and songs. An example of this would be the Scientific Ethics Report shown in Appendix G. Students at School Site C were allowed to choose a topic from a list provided

or preferably find their own topic. The students were to do a written report to be turned in to the teacher. They had to present their report orally but were encouraged to use visual aids such as models, role playing, skits, and music to stimulate their intellectual strength.

Journal entries were written by all students an average of one to two times per week throughout the intervention. Students used journals to record reflections, personal feelings, preferences, and predictions. Journals were also used to assess students' transfer of information to other subject areas. Journals were reviewed weekly to provide continual feedback in an attempt to increase communication between teacher and student.

In addition to these interventions, traditional teaching methods were also used. Class discussions, presentations, and videos were used to present content in all three school sites. Worksheets and written tests were used to check for understanding and individual accountability.

Presentation and Analysis of Results

In order to assess the effects of the use of cooperative learning, multiple intelligences, intrinsic and extrinsic factors, and student choice on motivation, the researchers recorded targeted behaviors with the use of observation checklists. These data are presented in figures 3, 4, and 5.

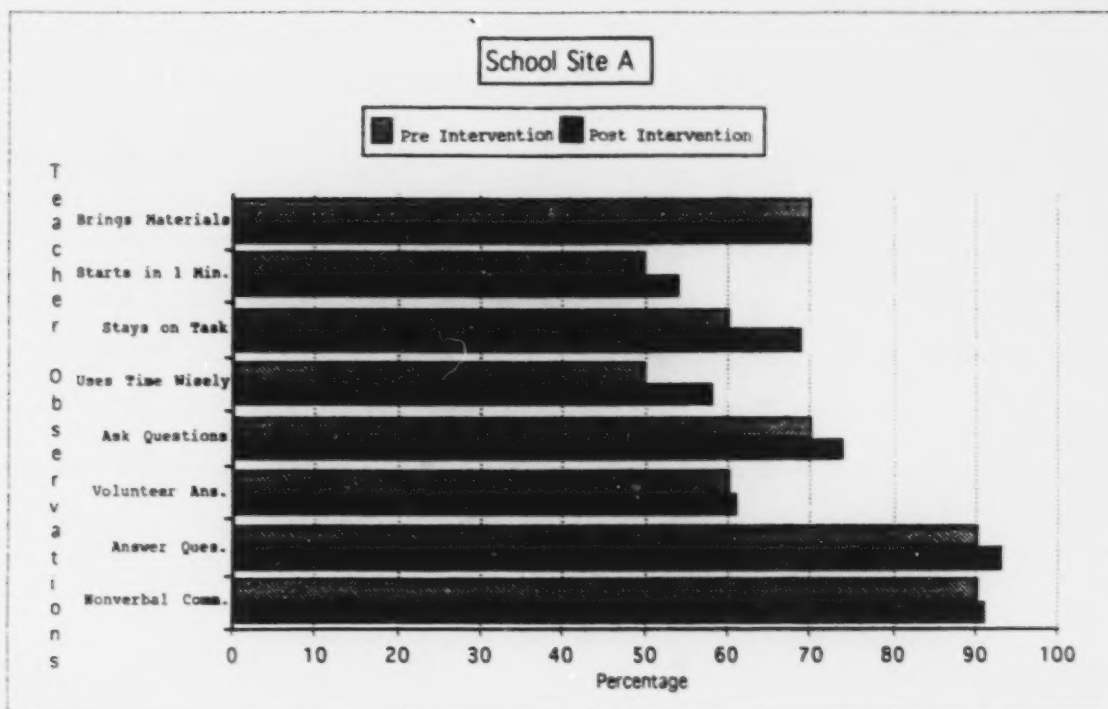


Figure 3. Categories and frequency of students' on-task behaviors and class participation for School Site A during the last three weeks of the first semester of the 1996-97 school year.

Figure 3 shows the amount of class participation and time-on-task for School Site A. The percent of students who brought materials to class remained constant at 70%. There was an increase from 50% to 54% in the number of students who started assigned tasks. A significant increase of 60% to 69%, was recorded in the number of students who stay on task. A substantial increase of 50% to 58% also occurred in the area of

students using time wisely by maintaining involvement throughout class time.

Students who asked questions during class time rose from 70% to 74%. The number of students who volunteered answers increased slightly from 60% to 61%. There was an increase from 90% to 93% in the number of students who answered questions when called upon. Finally, the percent of students who exhibited nonverbal communication rose slightly from 90% to 91%.

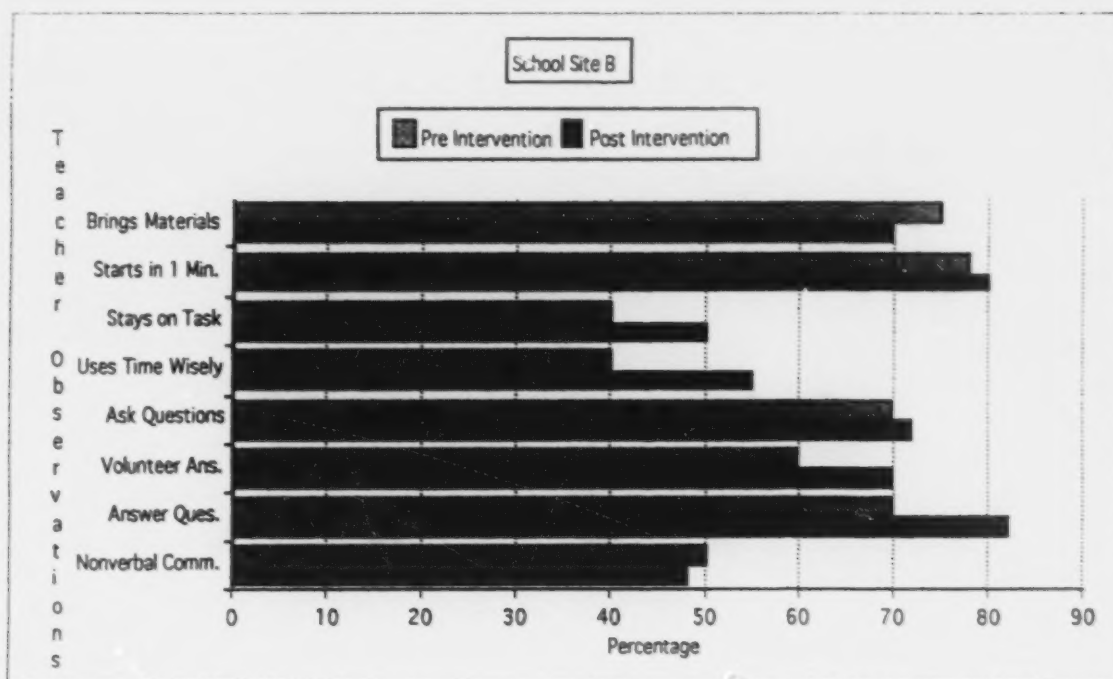


Figure 4. Categories and frequency of students' on-task behaviors and class participation for School Site B during the last three weeks of the first semester of the 1996-97 school year.

Figure 4 shows a slight decrease in the number of students at School Site B who bring their necessary materials for class. The categories which record on-task behaviors all show an increase after the intervention. Students showed a small increase, 2%, in the category "starts in one minute". The next two categories, "stays on task" and "uses time wisely", showed larger increases of 10% and 15%. Three of the categories which involve class participation, "asks questions", "volunteers answers", and "answers questions", also showed an increase at School Site B. The final category, "nonverbal communication", declined by 2%.

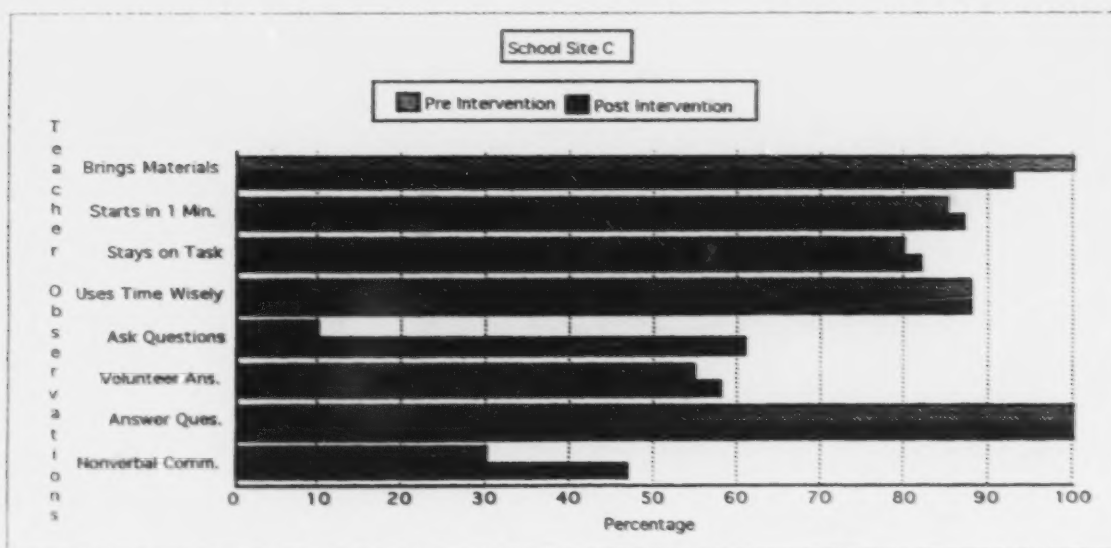


Figure 5. Categories and frequency of students' on-task behaviors and class participation for School Site C during the last three weeks of the first semester of the 1996-96 school year.

Figure 5 shows mixed results at Site C when comparing pre-intervention and post-intervention data. Of the eight categories listed, one went down 7% during the intervention. Two remained the same from start to finish and the other five showed an increase in the targeted behaviors. Three of the increases were 3% or less; however, the other two had increases of 17% and 51%.

The first four categories correspond to the on-task behaviors shown in Figure 1 of this document. These categories showed minimal change ranging from a high of 7% to no change. It should be noted that these four behaviors were all 80% or higher at the beginning of the research.

The classroom participation behaviors had an average increase of 16% during the semester. This is in contrast to on-task behaviors that had a 1% overall decrease, but these categories were almost 40% lower at the beginning of the intervention. The eight behaviors exhibited an increase of almost 8% during the intervention at School Site C.

Student attendance rates have been documented for each month of the first semester of the 1996-97 school year. A summary of the attendance rates is presented in figure 6.

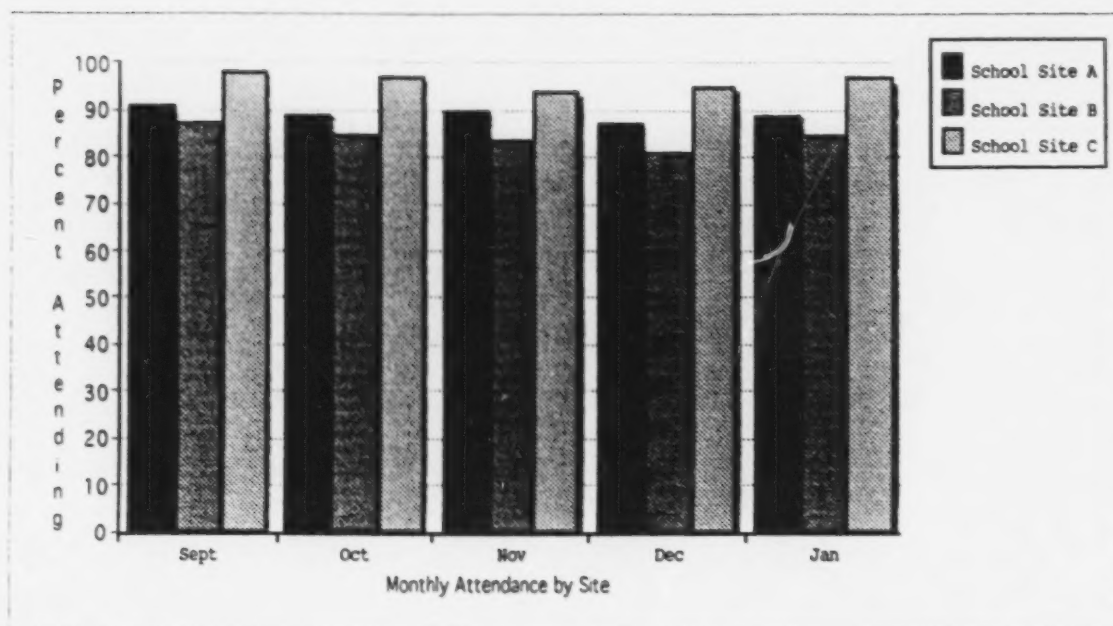


Figure 6. Monthly attendance rates of the targeted classes for the first semester of the 1996-97 school year.

School Site A began with an attendance rate of 91%. The attendance rate fluctuated between 87% and 91% throughout the five month intervention period. December showed the lowest rate of attendance, 87%, possibly due to vacations and holidays. September showed the highest rate of attendance of 91%. The average attendance rate for the five months was 89%.

School Site B has an average attendance rate of 84%. The months of September through November showed a very small decline which totaled 3%. The lowest rate, 81%, was in December, perhaps

due to the holiday season. However, the attendance rate rose again in January which was also the end of the semester and the intervention.

School Site C started the semester with a 98% attendance rate and dropped to a low of 94% in November. The average attendance for the first semester was approximately 96% with only a 2% deviation in any one month. The low month for attendance was November when two students went on vacations with their parents.

The total number of students of all three schools involved in the research declined from 75 to 72 due to student mobility. Of these 72 students the total attendance rate was 90%.

A synthesis of the researchers' journals recorded throughout the intervention finds several commonalities. Cooperative learning was used at all school sites for a minimum of at least one time per week. All three researchers increased their use of graphic organizers. A shift from traditional teacher driven lecture to the teacher as a facilitator was also recorded at all three school sites. Journals also indicated an increase in lesson plans targeting each of the seven intelligences.

Conclusions and Recommendations

Based on the presentation and analysis of the data on observation checklists, attendance rates, and ongoing journals of

classroom behaviors, the students showed an overall improvement in targeted behaviors.

The data collected for School Site A over the research period indicates an overall improvement in class participation and on-task behaviors. Each area of targeted skills and behaviors increased, except for one, in the category referring to time-on-task. The one area that showed no improvement was that of students bringing materials to class. Disappointingly, this area remained constant at 70%. At the beginning of each quarter the students are instructed to bring specific materials to class daily. They are to have folders specifically for Health class which are to remain in the classroom unless a student has homework or a test to study for. Students are to have a journal, additional paper, and a writing utensil daily. After reviewing the teacher's journal, a noticeable pattern began to develop. The days that students tended to come to class without materials, mainly journals and folders, were the days when homework or journal entries had been assigned. The following day several students would come to class without the necessary materials. Accustomed to the standard routine, many of these students would browse through the folder basket searching for their folders only to realize they were in their lockers. Overall, most students seemed to make a genuine effort to bring materials daily.

The research indicates that the other three areas regarding time-on-task showed an improvement. The number of students who started a task in one minute rose from 50% to 54% during the intervention. The number of students who stayed on task increased by 9%, from 60% to 69%. The students who used class time wisely rose from 50% to 58%. The varied use of teaching techniques and styles appears to have contributed to these increases. The use of cooperative learning, hands-on activities, and the incorporation of the seven multiple intelligences seemed to play a part in sparking an increase in student interest. Very early in the quarter the cooperative roles and rules were presented, reviewed, and practiced. This procedure seemed to become second nature to the students as they worked on assigned tasks.

Abandoning several traditional teaching styles and creating lessons that included presentations, role play, hands-on activities, music, and games allowed students to share personal talents and become actively engaged in academic endeavors. At times, students were already sharing ideas and planning strategies on how to attack a task before the instructions were completely given. During independent tasks, students were more inclined to consult with group members when a question about

content or directions arose even though the task was not a cooperative one.

The data indicate that each area regarding class participation showed improvement. The percent of students who asked questions, volunteered answers, and answered when called upon increased during the research period. Class and group bonding activities, as well as exploring and practicing various social skills, appears to have contributed to this increase. Bonding activities seem to build trust between students which in turn established a comfortable classroom climate. The teacher's journal indicated that even shy or reserved students tended to ask questions and volunteer answers.

A slight increase in nonverbal communication may have been due to the constant reinforcement of listening skills. At the start of each quarter students completed T-charts regarding what listening skills "looked like" and "sounded like" (Appendix H). Throughout the quarter the T-charts were referred to and the items listed on the charts were practiced by the students as well as the teacher.

The targeted class at School Site B showed improvement in almost all areas after the intervention. In addition to the effects of the intervention, several other factors may have also

influenced the results of both the increases and decreases in the behaviors observed.

The two categories that showed decreases were "brings materials" and "nonverbal communication". The researchers attribute the decrease in students bringing materials in part due to the number of students who come from low economic areas. Another factor may be that supplies were made available by the teacher and the students learned to rely on this. The inadequate responsibility level of third grade students, which may include trying to remember materials, taking good care of them, and returning borrowed materials, may also have contributed. The category "nonverbal communication" may have decreased due to the level of involvement in the types of lessons being taught during each time frame.

The six remaining categories all showed increases ranging from 2% to 15%. The largest increases were the categories "uses time wisely" and "answers questions". Evidence of these increases was noted throughout the intervention in the teacher's journal. An example entry that supports a change in the students using their time in a more productive manner stated: "I enjoy working with this group of students. Several students are taking the initiative to work on other projects when they complete an assignment". The other category, "answers questions" showed the

second highest increase. With the use of cooperative learning and multiple intelligences the researchers speculate that the students at School Site B were more actively involved in the learning process and in turn listened better when information and instructions were being given. Therefore, the students were more capable of answering questions when called upon.

The increases in the remaining categories were all found to be supported by the teacher's journal. Starting a task within one minute of it being assigned showed a slight increase. However, the researchers concluded that the beginning percentage, 78%, was a reasonable rate for the students at School Site B. Some students who frequently started a task late were usually found without necessary materials or they did not listen carefully to directions. The category "stays on task" started out at a much lower percentage and showed a much higher increase after the intervention. Similar teacher journal entries were noted at the beginning and at the end of the intervention pertaining to both of these categories. These included descriptions of students "wasting too much time" and "not ever having enough time to meet all of the students' needs". The categories, "asks questions" and "answers questions" were referred to in the teacher's journal throughout the intervention. Statements written such as "Several more students have been

raising their hands and participating during science class" and "It is actually difficult calling on students when so many are eager to answer questions", all supported the increases in these areas.

The researchers believe that it is also important to state the possibility of other factors that could have an effect on the results of the intervention. One example of this would be maturation. Over any given period of time students will naturally learn and grow. Another example could be the age of the students involved in the intervention. There may be a greater difference in growth over time of a younger student, such as a third grader, and less noticeable difference in an older student, such as a sophomore in high school.

The targeted class at School Site C appears to be atypical when analyzing data collected during the research. The researchers concluded that an independent variable caused the extreme variations reported from this class. The researchers did not feel this invalidated the research, but should be a consideration if this intervention is to be duplicated.

The variable that affected the results was the fact that these students were very motivated by grades. The teacher's journal and figure 5 both support this conclusion. "Brings materials" and "starts in one minute" are the two categories the

researchers interpret as a measure of extrinsic motivation or possibly compliant behavior. This class averaged almost 93% at the beginning of the intervention and was still at 90% when the intervention finished. The class also started and finished the intervention with 100% of the students answering questions when called upon in class. This also suggests compliant behavior on the part of the students. The teacher's journal entries in the last week of September and the first week of October corroborate these conclusions. The September entry was, "Group discussion did not go well. Are they intimidated?". In October the teacher wrote, "I don't know if I have them interested, or if they are bored but well behaved".

Two other categories started extremely low but seem consistent with the idea of compliant behavior. The categories "asks questions" and "nonverbal communication" started at 10% and 30% respectively. Students were hesitant at the beginning to take a risk such as asking questions that might be considered "stupid" by the teacher or their peers. The low nonverbal communication may revert back to the idea that students are to sit in straight rows, face the front, and only speak when asked to speak.

The interventions used in this research seemed to help these students improve their social skills and increase their higher

order thinking skills. The "nonverbal communication" and "asks questions" categories were improved by the combination of strategies used during the first semester. Cooperative learning activities improved students communication skills and confidence levels. This allowed students to question, debate, and react to each other and the teacher. Students used these skills to choose lessons that matched their specific intelligence and to reach consensus among their team members. An example of this growth is a comment written in the teacher's journal on December 6. Students were given a project-based learning assignment in task groups. The journal entry stated that the students had a lot of questions despite the handout explaining project requirements.

The last assessment used to measure increased motivation was monthly attendance. Figure 6 shows very little change in attendance for School Site C. The change that did occur could be directly attributed to illnesses and vacations.

In conclusion, the data for School Site C shows little or no improvement of on-task behavior, but dramatic growth in class participation. In many classes growth would be expected to be more consistent throughout all categories.

Upon completion of the research project, the teacher researchers recommend improvements for future researchers. The first modification would be to eliminate attendance records as a

measure of motivation due to the many uncontrollable circumstances related to attendance. Although the data indicated improvements in almost all targeted areas, one suggestion would be to include more frequent teacher observations of students' time-on-task and class participation. This would enable teachers to more accurately calculate the effects of the intervention. Due to the fact that the teacher researchers were independently implementing the intervention, it is suggested that research of this type should be conducted in a multiple teacher setting. Some examples would include implementation by an academic team, grade level teams, or as a building or district-wide staff development project. Future researchers may find increased student motivation if they become more familiar with varied instructional techniques prior to the intervention. An extended time period in which to conduct the intervention may also enhance the effectiveness of the research.

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APPENDICES

Observation Checklist

Figure 1

Teacher: _____ Class: _____ Date: _____

Target Skill: Time-On-Task

+ = Student is on task

- = Student is not on task

Names of Students	Comes with necessary materials.	Starts task in one minute.	Stays on task.	Maintains involvement throughout class time.	Comments
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					

Observation Checklist

72

Figure 2

Teacher: _____ Class: _____ Date: _____

Target Skill: Class Participation

+ = Student is participating

- = Student is not participating

Names of Students	Asks questions.	Volunteers answers.	Non-verbal communication. (e.g. nod, smile etc.)	Answers when called upon.	Comments
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					

BUSINESS CARDS

73

Appendix B



U
+
y
o
b
y



Steph

"c



Favorite Food

1. Pizza ^{sp} ^{cc}

M
A

Singer

A. Brandy ^{LB}

Subject

A. Health ^{sp} ^{cc}

M
A

W
AL
E

P

hobby

LB

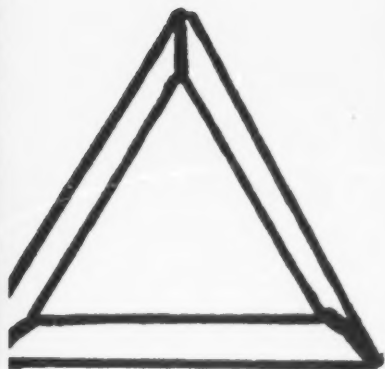
1. swimming ^{cc}

TV. show

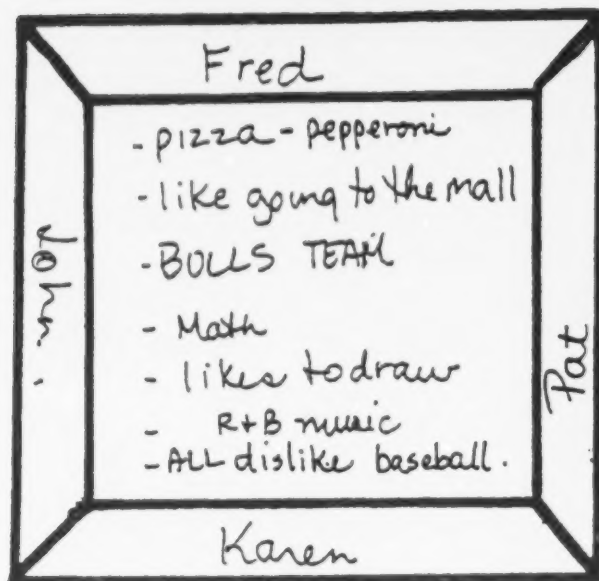
A. Sister Sister

LB

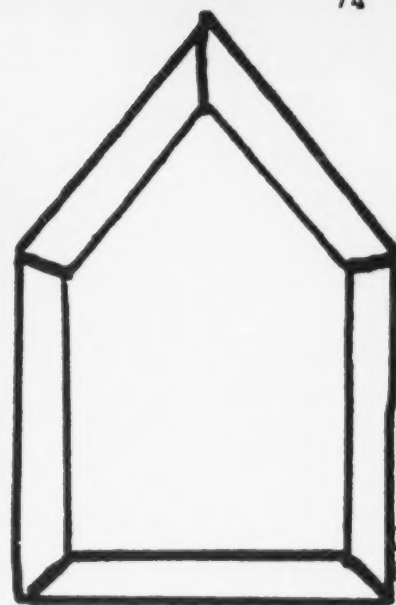
PICTURE FRAMES



3's



4's



5's.

This activity helps the students to find commonalities among each other.

1. Combine 2 interview pairs into a group of 4. (OPTIONAL 3's or 5's)
2. Each group needs a large piece of newsprint and 4 markers.
3. Each student's name is placed in the frame.
5-10 common interests are placed in the center. (Give 5-10 mins.)
4. BRAINSTORM COMMON INTEREST AREAS ON THE BOARD WITH TOTAL CLASS.
4. After 5-10 common interests are found have group make up a name for their group and a logo (based on commonalities) - PLACE ON NEWSPRINT.
5. EACH GROUP SHARES THEIR FRAME WITH THE REST OF THE CLASS.
6. AFTER EACH GROUP PRESENTS PLACE FRAME ON WALLS AROUND THE ROOM FOR ALL TO SEE.

I play soccer and
help friends with
homework

I am very good at
baseball

I love to dance and
I have danced
competitively

I have not gone on
vacations

I have a dog
named Snickers

People Search 1st Hr.

I go to Orlando and
Fort Myers for my
birthday

I have been to Seattle

I am 100% Dutch

My favorite sibling
is my one year old
sister

I play the guitar

I play soccer and
my friends have
wild ideas

I turn work into a
contest

My pets are named
Duke and Mylo

I pitch and play
second base

My youngest sister
lives in Texas

I went to Mt.
Rushmore

I love fishing and
camping at
Hayward, WI

I do all forms of skiing

I like Weird Al

I have two cats
Sunny and Cleo

I enjoy
programming
things on the
computer

The awards I've
won help me
overcome my
doubts

I want to be a
lawyer

I am proud of my
grades, writing, and
family

I have two weird cats

I am related to
Buffalo Bill Cody

I have three
brothers and a
dog named
Jordan

8th GRADE

BINGO SHEET

NAME _____

HOUR _____

Responsibility	Puberty	Risk behavior	Abstinence	Value
AIDS	Menstrual cycle	Sexually Transmitted Disease	Ova	Penis
Self-respect	Semen	Free Space	Peer Pressure	Conception
Sperm	ovulation	Self discipline	Risk situation	Uterus
Relationship	Premarital sex	testes	Adolescence	Vagina

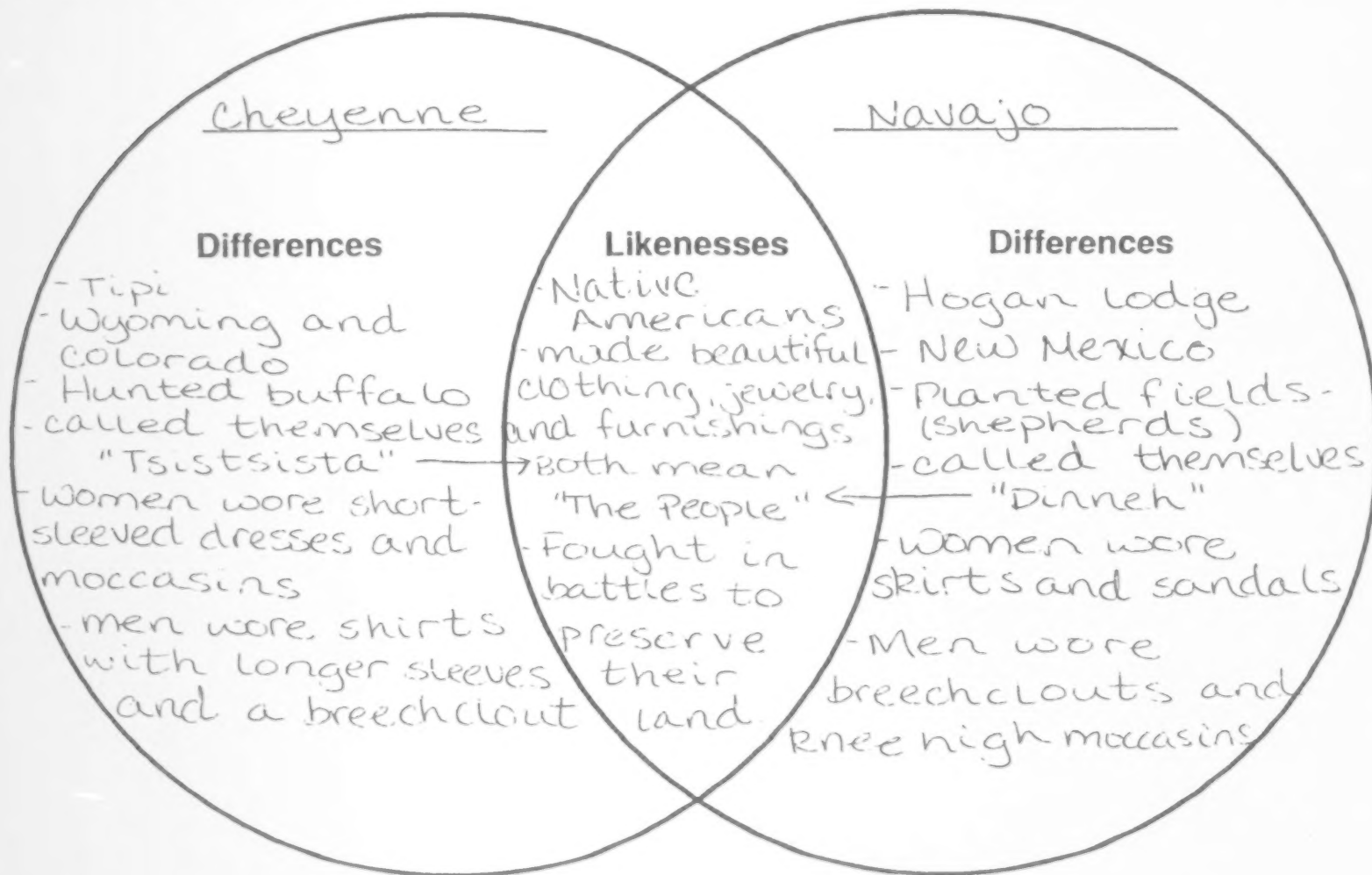
DIRECTIONS:

- USING THE VOCABULARY WORKSHEET, RANDOMLY SELECT 24 WORDS AND PLACE THEM IN EACH BINGO SQUARE
- BE SURE NOT TO DUPLICATE ANY WORDS ON YOUR BINGO CARD

Sun Dancer

's Venn Diagram

Write the names of the two tribes you are comparing on the lines and list their differences in the appropriate sections. In the center, list the likenesses.



SCIENTIFIC ETHICS REPORT

Each student will be required to do an individual report due December 6, 1996. Your report must have a title page, bibliography, and be written in ink or typed. Visual aids are needed for an A. Your report shall include facts pertaining to your subject area and persuasive arguments using those facts to support your position. Grading will be based on neatness, grammar, subject matter, and opinion. First draft must be in outline form and note cards must be used for oral report.

POSSIBLE SUBJECT AREAS

Cloning

Gene Splicing

Life Support

Animal Testing

Domestic Animals in Captivity

Wild Animals in Captivity

Euthenasia

Travel to Other Planets

Asteroid Defense

Abortion

Plastic Surgery

THE T-CHART	
Topic <u>Listening Skills</u>	
Looks Like	Sounds Like
- eye contact - pencils down - body facing the presenter - undivided attention - hands raised to ask questions or make comments - heads off the desks - head nod	- asking questions - "I see" - quiet when other person is talking - making appropriate comments - "then what happened" - "that's interesting" - repeating / para-phrasing